Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC

In the Matter of	)	
	)	
Advanced Methods to Target and Eliminate Unlawful Robocalls	)	CG Docket No. 17-59
	)	
	)	

COMMENTS OF TRANSACTION NETWORK SERVICES, INC.

Transaction Network Services, Inc. ("TNS"), by its attorneys, hereby provides comments in response to the Sixth Further Notice of Proposed Rulemaking ("FNPRM") issued by the Federal Communications Commission ("FCC" or "Commission") in the above-referenced docket.[1] In the FNPRM, the FCC granted in part reconsideration of its rules adopted in the *Call Blocking Fourth Report and Order* relating to redress and transparency requirements for calls blocked by terminating providers.[2] Among other actions, the Commission allowed terminating voice service providers that engage in call blocking to return SIP Code 603 as an alternative to returning SIP Codes 607 or 608 in such instances.[3] The Commission concluded that implementing SIP Code 607 or 608 by January 1, 2022 appeared infeasible and that mandating only those two SIP code responses could hinder robocall abatement goals by discouraging providers from blocking illegal and unwanted calls due to a technical inability to return the

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1 *Advanced Methods to Target and Eliminate Unlawful Robocalls – Petition for Reconsideration and Request for Clarification of USTelecom – The Broadband Association*, CG Docket No. 17-59, Order on Reconsideration, Sixth Further Notice of Proposed Rulemaking, and Waiver Order, FCC 21-126 (rel. Dec. 14, 2021) ("FNPRM").

2 *Id.* at ¶¶ 12-42; *see Advanced Methods to Target and Eliminate Unlawful Robocalls*, Fourth Report and Order, CG Docket No. 17-69, 35 FCC Rcd 15221 (2020) ("Call Blocking Fourth Report and Order").

3 *FNPRM* at ¶ 13.

response code.[4] The Commission, therefore, modified its rules to allow the use of SIP Code 603 in addition to SIP Code 607 or 608 for call blocking notification.[5]

The Commission, however, "continue[d] to believe that we should retain the requirement that terminating voice service providers ultimately use only SIP Codes 607 or 608 [for call blocking notification]."[6] Accordingly, the *FNPRM* seeks comment on this belief and "how to transition away from the use of SIP Code 603 for immediate notification."[7] TNS submits these comments in response to the Commission's request.

As one of the leading analytics engines ("AE") supplying robocall mitigation tools to carriers and subscribers, TNS continues to support the Commission's multi-faceted effort to combat illegal robocalls. TNS' Call Guardian service is a robocall detection solution implemented by four of the six largest wireless carriers in the United States, by major cable VoIP providers and over a hundred rural wireline and wireless carriers. Among other actions, Call Guardian enables voice service providers to block illegal or unwanted robocalls. Transparency and availability of redress are key components of TNS' service. TNS has been a leader in redress practices, creating a portal for the submission of requests well before FCC rules were adopted, sharing redress claims with other AEs and participating in the industry-led USTelecom Blocking and Labeling Working Group.

As explained below, the Commission should not sunset the use of SIP Code 603 as a notification method, nor should it rush the implementation of SIP Codes 607 and 608. Instead, the Commission should allow the industry to use, develop and potentially adapt SIP Codes 603,

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4 *Id.* at ¶ 15.

5 *Id.* at ¶ 22; see 47 C.F.R. § 64.1200(k)(9)(i) (amended effective January 31, 2022).

6 *FNPRM* at ¶ 43.

7 *Id.* at ¶ 44.

607 and 608 as are best suited to providing notification to callers in a timely and cost-effective manner. Further, the Commission should not require the use of a jCard due to the extensive resources and network upgrades that would be required for its universal use.

I. BECAUSE SIP CODE 603 CAN PROVIDE EFFECTIVE NOTIFICATION, THE COMMISSION SHOULD CONTINUE TO ALLOW ITS USE AS AN ALTERNATIVE NOTIFICATION METHOD

In the FNPRM, the Commission states a belief that SIP Codes 607 and 608 are the best long-term solution for immediate notification to callers, because these codes "provide important information that enables callers to contact blocking entities and initiate the redress process." It, therefore, asks for comment on "whether and how to transition away from the use of SIP Code 603." The Commission's apparent rush to transition from SIP Code 603 is inappropriate, however.

Use of SIP Code 603 is an appropriate and effective means of providing immediate notification to callers that a call was blocked. Indeed, in the FNPRM, the Commission agrees with USTelecom that SIP Code 603 "meets callers' needs" by providing actionable information to investigate the issue and take proactive steps.[8] TNS agrees with this assessment. TNS already has the technical ability in Call Guardian to support the use of SIP Code 603 for notifications of call blocking. This code is known in the industry and many providers used SIP Code 603 to indicate call blocking even before the FCC rules became effective.

Moreover, SIP Code 603 provides actionable information for call originators to investigate blocking and, if justified, seek redress for erroneous blocking. SIP Code 603 indicates that the cause of the failure was at the called party (or "user") and connotes a

[8] *FNPRM* at ¶ 17 (quoting Ex Parte Notice of USTelecom, at 2, CG Docket No. 17-59 (filed July 27, 2021)).

"Decline." As the Commission noted multiple times, IETF documentation already maps SIP Code 603 as a recommended response code for ISUP Code 21 used in TDM networks for blocking.[9] It contains the same level of detail in the response as SIP Codes 607 and 608. So long as call originators know to consider SIP Code 603 as a blocking notification, the call originator has notice that the call did not go through and has the means to investigate and seek redress.[10]

Furthermore, in order to address call originators' concerns, the industry is exploring enhancements to SIP Code 603 that will provide additional actionable information with the response code. TNS is a participant in these discussions. One idea being pursued is to modify SIP Code 603 to distinguish between analytics-based blocking and other reasons for a decline. If these discussions prove fruitful, a SIP Code 603 response would provide the same level of information as SIP Code 608, without the added cost and complexity of that response.

Given that the Commission has already found that SIP Code 603 is sufficiently "actionable and informative for callers"[11] (even prior to any potential enhancement), there is no need to sunset the use of SIP Code 603. The call originators' arguments against Code 603

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9 *FNPRM* at ¶ 17 & n.56 (citing *Call Blocking Fourth Report and Order*, ¶ 57).

10 The contention of some call originators that they would not know where to seek redress is unfounded. Currently, neither SIP Code 603 nor Codes 607 or 608 contain carrier or provider information. But it is not difficult to determine the voice service provider to which particular telephone numbers are assigned, which helps to identify the service provider to contact with redress concerns. Call originators also can seed their outbound calls with known test numbers from multiple carriers, in order to identify when particular voice service providers are blocking calls. Moreover, as the *FNPRM* acknowledges, terminating providers already provide a single point of contact and readily available information on how to initiate a redress request, as do TNS and other AEs. Thus, any of the approved response codes would provide sufficient information to begin redress if appropriate.

11 *FNPRM* at ¶20 ("We agree with voice service providers that have argued that SIP Code 603 provides information that is actionable and informative for callers.").

appear to be based solely on the notion that 607 and 608 in theory provide more information as to why a call was blocked – i.e., by the user or by the network. What the call originators do not show is why that additional information is required to seek redress, and what material benefit it provides to the caller. Regardless of the code used, the call originator will receive notice that its call was blocked at the terminating end. It is not clear that the reason why a call is blocked at the terminating end materially affects the call originators' actions in response to a notice of blocking. For example, would some callers not seek redress if they receive a response of SIP Code 607, indicating that the user declined the call? If so, the Commission must weigh the benefit of isolating this information for callers vs. the additional cost that voice service providers must bear in obtaining the information to support a differential response of SIP Code 607 or 608 and to send notifications using this new standard. If, on the other hand, the additional information will not be meaningful, and a call originator is likely to initiate redress procedures in any event, then only the fact of blocking at the terminating end is needed – which is a piece of information that all three SIP codes provide.

TNS submits that all three codes provide sufficient (and actionable) information for call originators. In addition, if SIP Code 603 can be modified in the way the industry is exploring, it will provide even more useful information to call originators. Terminating voice service providers should continue to have the flexibility to use the response code that is most cost effective and most easily supported in their networks. Therefore, the Commission should decline to modify the rules it adopted in the *FNPRM*.

II. TRANSMISSION OF A jCARD IS COSTLY AND TECHNICALLY COMPLEX, AND SHOULD NOT BE MANDATED BY THE COMMISSION

TNS is pleased that the Commission confirmed that the jCard is not required under current rules. As clarified in the *FNPRM*, the *Call Blocking Fourth Report and Order* adopted

rules mandating use of SIP Codes 607 and 608 as defined in the standards at the time.[12] Thus, "any parts of those standards that were optional at the time are optional under the Commission's rules."[13] Because the *FNPRM* seeks comments regarding whether it should provide a deadline for "finalization" or implementation of SIP Codes 607 and 608, TNS urges the Commission to be clear that implementation of the jCard will not be required in the future either.

As noted, the jCard is an optional parameter of SIP Code 608 per the December 2019 Draft Standard RFC8688 of the Internet Engineering Task Force (IETF).[14] The jCard provides contact information that identifies who to contact to request redress for the telephone number. A jCard may be inserted with SIP Code 608, per this proposal, if it is determined that the calling party will not use the content of the jCard for malicious purposes. Security and integrity of the jCard data is provided by encapsulating it within a JSON Web Token.

Support for this jCard presents multiple challenges. First, the standard is still a proposal. Without guidance from the standards body, the calling party experience will be inconsistent since the jCard is an optional parameter. It is TNS' hope that the jCard will remain optional in the standard, as it is further developed.

Second, SIP Code 608 with a mandatory jCard parameter is not viable and would be exceedingly difficult to implement across the telecommunications network. One prominent difficulty is that implementation of SIP Code 608 with the jCard parameter would require interworking with legacy network elements that don't support the jCard. This would require, it appears, the intermediary network element that issues the 608 code to play a verbal

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12 *FNPRM* at ¶ 17 n.53.

13 *Id.*

14 The draft standard and history are available at: https://datatracker.ietf.org/doc/rfc8688/ (last visited 01/27/2022).

announcement if none of the network elements in the call path support the jCard. As a result, an additional node, such as a Media Resource Function (MRF), would be needed, adding significant complexity and expense. If the call transits across a TDM network and all of the SIP elements in the call path support the jCard, the gateway that provides the ISUP/SIP interworking will also be required to transcode the jCard text into speech (TTS) and play the announcement. This would be an additional expense to the carrier and may require enhancements to convert a jCard to TTS before playing the announcement.

Third, and most challenging, the jCard must be secured. To ensure the integrity, security, and proper validation of the jCard, the JSON Web Tokens must be secure, so that the call originator can be confident that the jCard information has not been altered. To secure a JSON token, the industry would need to create and support an infrastructure and governance model similar to what was implemented for STIR/SHAKEN. This has not been developed at this point, and doing so would be particularly challenging for providers that have recently deployed modifications to implement STIR/SHAKEN in the first place.

For these and other reasons, TNS agrees with USTelecom that the jCard "cannot be implemented in a practical and cost effective way."[15] In any further discussion of SIP Code 608, the Commission should be clear that the jCard parameter is not required by the Commission and remains optional for terminating voice service providers.

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For the foregoing reasons, the Commission should continue to allow the use of SIP Code 603 as an alternative notification methodology indefinitely. SIP Code 603 provides actionable

15 *See FNPRM* at ¶ 43 n.119 (quoting USTelecom Reply).

information, and is well supported by other required procedures to facilitate redress processes. Moreover, if SIP Code 603 can be further modified, it would be at least as informative as the 607/608 alternatives. By contrast, SIP Codes 607 and 608 still require development and ultimately may not provide materially different information useful in the redress process. Finally, the optional jCard component of SIP Code 608 should remain optional in order to avoid a STIR/SHAKEN-style upgrade that would be necessary to support universal use of the component.

Respectfully Submitted,

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